

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Currently Amended) A computer system comprising:

at least one processor; and

a flexible operating system executable on the at least one processor to:

determine whether said flexible operating system is being used as a native operating system or as a virtualized operating system on said computer system, wherein the determining is based on checking a variable set during a boot process of the computer system;

and

execute in a first manner as a native operating system on the computer system in response to detecting that said flexible operating system is being used as the native operation system, and execute in a second manner as a virtualized operating system on said computer system in response to detecting that said flexible operating system is being used as the virtualized operating system,

wherein said flexible operating system is configured to operate in a non-virtualized environment when said flexible operating system is being used as the native operating system, and is configured to operate in a virtualized environment when said flexible operating system is being used as the virtualized operating system.

2. (Cancelled)

3. (Previously Presented) The computer system of claim 1 wherein said flexible operating system executing in said second manner comprises said operating system acting as a paravirtualized operating system.

4. (Previously Presented) The computer system of claim 3 wherein said paravirtualized operating system is operable to make a call to a Virtual Machine Monitor (VMM) for performing at least one privileged operation.

1           5.       (Currently Amended) ~~The computer system of claim 1~~ A computer system  
2 comprising:  
3           at least one processor; and  
4           a flexible operating system executable on the at least one processor to:  
5                 determine whether said flexible operating system is being used as a native  
6 operating system or as a virtualized operating system on said computer system; and  
7                 execute in a first manner as a native operating system on the computer system in  
8 response to detecting that said flexible operating system is being used as the native operation  
9 system, and execute in a second manner as a virtualized operating system on said computer  
10 system in response to detecting that said flexible operating system is being used as the  
11 virtualized operating system.  
12                 wherein said flexible operating system is configured to operate in a  
13 non-virtualized environment when said flexible operating system is being used as the native  
14 operating system, and is configured to operate in a virtualized environment when said flexible  
15 operating system is being used as the virtualized operating system.  
16                 wherein said flexible operating system executing in said second manner  
17 comprises said operating system acting as a paravirtualized operating system, wherein said  
18 paravirtualized operating system is operable to make a call to a Virtual Machine Monitor (VMM)  
19 for performing at least one privileged operation.  
20                 wherein said flexible operating system is executable to determine ~~determines~~ whether  
21 said flexible operating system is being used as the native operating system or the virtualized  
22 operating system by:  
23                 checking a global variable that indicates whether said flexible operating system is being  
24 used as the native operating system or as the virtualized operating system on said computer  
25 system.

1           6.       (Previously Presented) The computer system of claim 5, wherein said flexible  
2     operating system is executable to further:

3                 execute an instruction which, when the flexible operating system is being used as the  
4     virtualized operating system, causes a Virtual Machine Monitor (VMM) to set at least one  
5     configuration bit to a first value, and when the flexible operating system is being used as the  
6     native operating system, causes the VMM to set said at least one configuration bit to a different  
7     value.

1           7.       (Cancelled)

1           8.       (Currently Amended) The computer system of claim 1, wherein said flexible  
2     operating system is executable to further:

3                 make a call to a Virtual Machine Monitor (VMM) for performing at least one privileged  
4     operation when the flexible operating system is executed in the second manner as the virtualized  
5     operating system.

1           9.       (Previously Presented) The computer system of claim 8 wherein making the call  
2     to said VMM uses an Application Program Interface (API) defined for said VMM.

1           10.      (Cancelled)

1           11.     (Currently Amended) A method comprising:  
2           implementing at least one operating system on a computer system;  
3           determining, by said computer system, whether said at least one operating system is a  
4           native operating system or a guest operating system on a virtual machine, wherein the  
5           determining is based on checking a variable set during a boot process of the computer system;  
6           said at least one operating system operating in a first manner if determined that it is a  
7           native operating system, wherein the native operating system operates in a non-virtualized  
8           environment; and  
9           said at least one operating system operating in a second manner if determined that it is a  
10          guest operating system on a virtual machine, wherein the guest operating system operates in a  
11          virtual environment provided by the virtual machine.

1           12.     (Currently Amended) The method of claim 11 wherein said determining  
2           comprises:  
3           said at least one operating system determining during runtime based on the variable  
4           whether ~~[[it]]~~the at least one operating system is being used as said native operating system or as  
5           said guest operating system on the virtual machine.

1           13.     (Currently Amended) The method of claim 12 wherein said ~~at least one operating~~  
2           ~~system determines whether it is being used as said native operating system or as said guest~~  
3           ~~operating system based at least in part on a value of variable~~ is a global variable.

1           14.     (Previously Presented) The method of claim 11 wherein said first manner  
2           comprises said native operating system managing hardware resources of the computer system.

1           15.     (Previously Presented) The method of claim 14 wherein said second manner  
2           comprises said guest operating system having access to the computer system hardware resources  
3           that are managed by a Virtual Machine Monitor (VMM).

1           16.     (Previously Presented) The method of claim 15 wherein said guest operating  
2     system makes, for at least one privileged operation, a call to the VMM.

1           17.     (Previously Presented) A computer system comprising:  
2     at least one processor;  
3     a virtual machine monitor (VMM); and  
4     an operating system executable on the at least one processor to:  
5         determine whether said operating system is running as a virtualized operating  
6     system or a native operating system, wherein the determining is based on checking a variable set  
7     during a boot process of the computer system; and  
8         adapt operation of said operating system depending on whether it is running as the  
9     virtualized operating system or native operating system, wherein the native operating system  
10    ~~manages-is configured to manage~~ hardware resources in a non-virtualized environment without  
11    the VMM, and wherein the virtualized operating system ~~manages-is configured to manage~~  
12    hardware resources using the VMM.

1           18.     (Currently Amended) The computer system of claim 17 wherein said ~~operating~~  
2     ~~system determines whether said operating system is running as the virtualized operating system~~  
3     ~~or the native operating system by checking the value of variable is~~ a global variable.

1           19.     (Currently Amended) The computer system of claim 18 wherein said operating  
2     system ~~checks-is executable to check~~ said value of said global variable before performing certain  
3     privileged operations.

1           20.     (Currently Amended) The computer system of claim 17 wherein said operating  
2     system ~~performs-is executable to perform~~ the determining by determining, before execution of  
3     certain privileged instructions, whether said operating system is running as the virtualized  
4     operating system or native operating system.

1           21.     (Cancelled)

1           22.     (Currently Amended) The computer system of claim [[21]]17 wherein said  
2     ~~adapting operation of said operating system in executing said certain when running as the~~  
3     virtualized operating system executes privileged instructions comprises by making at least one  
4     call to the VMM.

1           23.     (Cancelled)

1           24.     (Previously Presented) The computer system of claim 17 wherein said operating  
2     system performs the determining by executing an instruction which, when the operating system  
3     is being used as the virtualized operating system, causes the VMM to set at least one  
4     configuration bit to a first value.

1           25.     (Previously Presented) The computer system of claim 24 wherein said operating  
2     system performs the determining by further determining whether said operating system is  
3     running as the virtualized operating system or native operating system based at least in part on a  
4     determined value of at least one configuration bit after execution of said instruction.

1           26.     (Cancelled)

1           27.     (Currently Amended) A system comprising:  
2           hardware resources;  
3           a virtual machine monitor (VMM); and  
4           ~~at least one a flexible~~ operating system for managing said hardware resources, wherein  
5           said ~~at least one flexible~~ operating system is operable to determine whether it is running in a  
6           virtualized environment or in a native, non-virtualized environment, wherein the determining is  
7           based on checking a variable set during a boot process of the system, wherein said ~~at least one~~  
8           flexible operating system is operable to selectively execute in a first manner if determined that  
9           said ~~at least one flexible~~ operating system is running in the native environment and in [[said]] a  
10          second manner if determined that said ~~at least one flexible~~ operating system is running in the  
11          virtualized environment, wherein in the first manner said ~~at least one flexible~~ operating system  
12          ~~manages-is configured to manage~~ said hardware resources without using the VMM, and wherein  
13          in the second manner said ~~at least one flexible~~ operating system ~~manages-is configured to~~  
14          manage said hardware resources using the VMM.

1           28.     (Cancelled)

1           29.     (Previously Presented) The system of claim 27 wherein said first manner  
2           comprises acting as a native operating system.

1           30.     (Currently Amended) The system of claim 27 wherein said second manner  
2           comprises acting as a ~~paravirtualized-virtualized~~ operating system.

1           31.     (Currently Amended) The system of claim 30 wherein said ~~paravirtualized~~  
2           virtualized operating system is operable to make a call to the VMM for performing at least one  
3           privileged operation.

1           32.     (Cancelled)

33. (Currently Amended) The system of claim 27 wherein said ~~at least one flexible~~  
operating system ~~adapts~~ is configured to adapt its operation to make a call to said VMM for  
performance of at least one privileged instruction when said ~~at least one flexible~~ operating  
system determines that [[it]]said flexible operating system is running in [[a]]the virtualized  
environment.

34. (Cancelled)

35. (Currently Amended) A system comprising:  
at least one processor;  
a flexible operating system executable on the at least one processor and that is capable of  
acting as either a native operating system or as a virtualized operating system; and  
means for determining whether the flexible operating system is to be used as a native  
operating system in a non-virtualized environment without a Virtual Machine Monitor (VMM)  
or as a virtualized operating system in a virtualized environment with the VMM, wherein the  
determining means ~~stores information that is accessible by the flexible operating system to~~  
~~indicate checks a variable set during a boot process of the system for determining~~ whether the  
flexible operating system is being used as [[a]]the native or as [[a]]the virtualized operating  
system.

36. (Currently Amended) The system of claim 35 wherein the determining means  
makes the determination during runtime ~~a boot-up process~~ of the system.

37. (Currently Amended) The system of claim 35 further comprising:  
means for virtualizing resources of said system and multiplexing said resources among  
one or more virtualized operating systems.

38. (Cancelled)



39. (Currently Amended) The system of claim 35 wherein if determined that [[it]]said flexible operating system is being used as [[a]]the virtualized operating system, said flexible operating system ~~acting-is configured to act~~ as [[a]]the virtualized operating system.

40. (Currently Amended) The system of claim 35 wherein if determined that [[it]]said flexible operating system is being used as [[a]]the native operating system, said flexible operating system ~~acting-is configured to act~~ in a first manner, and if determined that [[it]]said flexible operating system is being used as [[a]]the virtualized operating system, said flexible operating system ~~acting-is configured to act~~ in a second manner.

41. (Cancelled)

42. (Currently Amended) The system of claim 35, wherein the virtualized operating system ~~manages-is configured to manage~~ hardware resources of the system by using the VMM, and wherein the native operating system ~~manages-is configured to manage~~ the hardware resources in the non-virtualized environment without using the VMM.

43. (Currently Amended) The computer system of claim 1, wherein the virtualized operating system ~~manages-is configured to manage~~ hardware resources of the system by using a virtual machine monitor (VMM), and wherein the native operating system ~~manages-is configured~~ to manage the hardware resources in the non-virtualized environment without using the VMM.

44. (New) The computer system of claim 1, wherein the at least one processor is configured to selectively set the variable to one of plural values during the boot process, a first of the plural values to indicate that the flexible operating system is to be used as the native operating system, and a second of the plural values to indicate that the flexible operating system is to be used as the virtualized operating system,  
wherein the flexible operating system is executable to check the variable during runtime after the boot process.

1           45.     (New) The method of claim 11, further comprising:

2           selectively setting the variable to one of plural values during the boot process, a first of  
3     the plural values to indicate that the at least one operating system is to be used as the native  
4     operating system, and a second of the plural values to indicate that the at least one operating  
5     system is to be used as the guest operating system; and  
6           the at least one operating system checking the variable during runtime after the boot  
7     process.

1           46.     (New) The computer system of claim 17, wherein the at least one processor is  
2     configured to selectively set the variable to one of plural values during the boot process, a first of  
3     the plural values to indicate that said operating system is to be used as the native operating  
4     system, and a second of the plural values to indicate that said operating system is to be used as  
5     the virtualized operating system, wherein said operating system is executable to check the  
6     variable during runtime after the boot process.

1           47.     (New) The system of claim 37, further comprising at least one processor  
2     configured to selectively set the variable to one of plural values during the boot process, a first of  
3     the plural values to indicate that the flexible operating system is to be run in the native  
4     environment, and a second of the plural values to indicate that the flexible operating system is to  
5     be fun in the virtualized environment,  
6           wherein the flexible operating system is operable to check the variable during runtime  
7     after the boot process.